REMARKS

Claims 1-5, 9, 14-16, 18-19, 23, 24, 35 and 39 have been amended. Claims 1-39 are pending in the present application. Applicant reserves the right to pursue the original claims and other claims in this application and in other applications.

Claims 1-39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Addiego, U.S. Patent Number 5,917,588 (hereinafter "Addiego") in view of Levy et al., U.S. Patent Number 4,579,455 ("Levy"). The rejection is respectfully traversed and reconsideration is respectfully requested.

Claim 1 as amended recites a method of operating an inspection apparatus to inspect a device. The method comprises the steps of "displaying a plurality of images corresponding to respective scanned areas of the device" and "inputting at least two desired scanned images to be inspected that have been selected by a user of the inspection apparatus." According to claim 1, the desired scanned images are "selected from the images corresponding to the scanned areas of the device." The method further comprises the steps of "deriving a spatial relationship between the input desired scanned images; and forming a pattern to be recognized on the device from the input desired scanned images and the derived spatial relationship." Applicant respectfully submits that the cited combination fails to teach or suggest the claimed invention.

As noted in Applicant's prior Amendments, Addiego shows an inspection system that determines, locates and classifies defects on a wafer surface. The results of the inspection are printed, transmitted, and/or displayed on a system monitor. During wafer production, the Addiego system continuously inspects specimen wafers and looks for defects present on each specimen wafer. The Addiego system determines the presence of defects from acquired image data of a specimen wafer by analyzing the

difference image of two adjacent reticle fields (col. 8, lines 60-63). The Addiego system always analyzes the difference image of two adjacent reticle fields, neither of which are input into the system based on selections of "desired scanned images" by a user.

The Office Action acknowledges that Addiego fails to teach or suggest selecting displayed images based on an input by a user. As such, Addiego cannot teach or suggest several steps of amended claim 1 including the step of "inputting at least two desired scanned images to be inspected that have been selected by a user of the inspection apparatus" where the desired scanned images are "selected from the images corresponding to the scanned areas of the device" (emphasis added). Moreover, Addiego cannot teach or suggest "deriving a spatial relationship between the input desired scanned images; and forming a pattern to be recognized on the device from the input desired scanned images and the derived spatial relationship" (emphasis added).

To overcome this deficiency, the Office Action combines Addiego with Levy. As noted in Applicant's prior Amendments, Levy shows an inspection system 20 in which photomask 26 is inspected for defects by comparing pixel representations of two duplicate die patterns of the photomask. Defects are identified at those locations where the two pixel representations do not match. The pixel representations are formed by a combination of optical and electronic means. See Column 4, lines 47-52. Levy states that "inspection parameters may be prerecorded and input to microprocessor 64 via a tape cassette 74, or may be input manually through manual controls 76. Instructions to the operator or visual display of the photomask may be displayed on a CRT display 78." See Column 5, lines 52-58.

The Office Action relies on Levy's inputting of "parameters" as teaching selection of images by a user. Applicants respectfully traverse this argument. Claim 1 as amended requires "inputting at least two desired scanned images to be inspected

that have been selected by a user of the inspection apparatus." Levy's parameters are prerecorded or input before the wafers are scanned. As such, there is no way for Levy to input "desired scanned images" as required by claim 1. That is, since the Levy parameters are entered before the wafer is scanned, the "parameters" cannot correspond to desired scanned images.

Accordingly, both Addiego and Levy, even when considered in combination fail to teach or suggest "inputting at least two desired scanned images to be inspected that have been selected by a user of the inspection apparatus, the desired scanned images being selected from the images corresponding to the scanned areas of the device." As such, the cited combination also fails to teach or suggest "deriving a spatial relationship between the input desired scanned images; and forming a pattern to be recognized on the device from the input desired scanned images and the derived spatial relationship." For at least the reasons set forth above, Applicant respectfully submits that claim 1 is allowable over the cited combination.

Claim 19 as amended recites "selecting at least two of the plurality of displayed images based on at least one selection of a desired scanned image by a user of an inspection apparatus; deriving a relationship between the selected images, the derived relationship being determined by forming vectors in at least two dimensions between the selected images; and forming a pattern to be recognized on the wafer from the selected images and the derived relationship." Applicant respectfully submits that the cited combination fails to teach or suggest the method of claim 19.

Specifically, as noted above, Addiego and Levy even when combined do not teach or suggest inputting desired scanned images. Moreover, neither reference teaches or suggests "deriving a relationship between the selected images" where the derived relationship is "determined by forming vectors in at least two dimensions between the

selected images." As noted above and in Applicant's prior Amendments, Addiego always looks at adjacent images. There is no determination of two dimensional vector relationships between the images in Addiego. This determination is not taught by Levy either. As such, the cited combination fails to teach or suggest the elements of claim 19. For at least the reasons set forth above, Applicant respectfully submits that claim 19 is allowable over the cited combination.

Claim 23 recites a method of inspecting a semiconductor device having objects formed therein, said method comprising the step of "forming a pattern to be recognized on the device from the selected images and a spatial relationship between the images, the spatial relationship being determined by forming vectors in at least two dimensions between the selected images, wherein features that are not to be included in the pattern to be recognized are filtered out during said selecting step." For at least the reasons set forth above, Applicant respectfully submits that claim 23 is allowable over the cited combination. Moreover, Applicant respectfully points out that since neither reference allows a selection of desired images, the cited combination cannot filter out "features that are not to be included in the pattern to be recognized." This is one more reasons why claim 23 is allowable over the cited combination.

Claim 24 recites a processor for "inputting at least two user selected desired scanned images from the input device, said user selected images corresponding to scanned images displayed on the display, deriving a spatial relationship between the user selected images and forming a pattern to be recognized on the manufacturing device from the user selected images and the derived spatial relationship." For at least the reasons set forth above, Applicant respectfully submits that claim 24 is allowable over the cited combination.

Claims 35 and 39 recite an inspection apparatus "wherein the derived relationship is determined by forming vectors in at least two dimensions between the user selected images." For at least the reasons set forth above, Applicant respectfully submits that claims 35 and 39 are allowable over the cited combination.

"The statutory standard for the ultimate determination of obviousness provides that a claimed invention is unpatentable if the differences between it and the prior art 'are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." Brown & Williamson Tobacco Corp. v. Phillip Morris Inc., 229 F.3d 1120, 1156 (Fed. Cir. 2000). According to such a standard, a determination of obviousness based on a combination of Addiego and Levy cannot be sustained because Addiego and Levy, whether considered alone or in combination, fail to teach or suggest the limitations of claims 1, 19, 23, 24, 35 and 39. Accordingly, the rejection of claims 1, 19, 23, 24, 35 and 39 should be withdrawn.

Claims 2-18 depend from claim 1, claims 20-22 depend from claim 19, claims 25-34 depend from claim 24 and claims 36-38 depend from claim 35. Claims 2-18, 20-22, 25-34 and 36-38 are allowable along with claims 1, 19, 24 and 35 for at least the reasons set forth above and on their own merits. The rejection should be withdrawn and all of the claims allowed.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

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Respectfully submitted,

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